

Parturition in the Indian False Vampire Bat, *Megaderma lyra lyra* Geoffroy¹

A. GOPALAKRISHNA, M. S. KHAPARDE AND (SMT) V. M. SAKPAL
Department of Zoology, Institute of Science, Nagpur
(With a plate)

Details of parturition in the Indian False Vampire Bat *Megaderma lyra lyra* are described here based on the observation of 11 normal deliveries, where a single young one was brought forth by each mother, and one unique case, where the mother delivered still-born twins, a male and a female. The mother remains hanging in her normal posture (head down) by only her right leg during the entire period of labour, and delivers the young with head presentation. It takes on an average 97 minutes for normal delivery. The mother eats the placenta completely. The eyes of the young open within a few minutes after the head emerges out. The young one is active and moves the head vigorously even before the body is completely out of the vagina.

INTRODUCTION

Although voluminous literature has accumulated on the various aspects of reproduction, the details of parturition are known with regard to a few species only such as *Tadarida brasiliensis cynocephala* (Sherman, 1937), *Artibeus planirostris* (Jones, 1946), *Myotis lucifugus lucifugus* (Wimsatt, 1945, 1960), *Hipposideros speoris* and *Cynopterus sphinx* (Ramakrishna, 1950), *Corynorhinus rafinesquei* (Pearson *et al.*, 1952), *Rhinopoma kinneari* (Anand Kumar, 1965) and *Pipistrellus ceylonicus chrysothrix* (Gopalakrishna & Madhavan, 1971).

The present paper embodies observations on the details of parturition in *Megaderma lyra lyra*, the Indian False Vampire Bat. This species conceives in November and delivers the young in the second half of the following

April (Gopalakrishna, 1950; Ramakrishna, 1950; Ramaswamy, 1961; Brosset, 1962). A single young is delivered by each female during each pregnancy, which is usually carried in the left uterine cornu and rarely in the right (Gopalakrishna, 1950).

MATERIAL AND METHODS

Twelve pregnant females of *Megaderma lyra lyra* carrying full term conceptuses were collected between 16th and 21st April, 1972 and were kept under continuous observation in the laboratory. Each specimen was kept in a separate glass cage with a wire mesh on the top. Ten deliveries took place during the day time between 11 a.m. and 5 p.m., while two deliveries between 6 p.m. and 10 p.m. 11 out of the 12 specimens delivered a single young each, while one exceptional specimen delivered two young ones, a male and a female, both still-born. A minute to minute record was

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Photograph of a female in mid-labour with the head of the young one completely out of the vagina. The eyes of the young are open.

made of the various events during each delivery. The timing mentioned in the present report relates to the average calculated from the observations on the 11 normal deliveries. The exceptional case has been mentioned separately.

OBSERVATIONS

1. Normal parturition

Prior to the onset of labour the female is restless and constantly changes her position in the cage. But, after the commencement of labour she does not normally change her place although she exhibits spasmodic contortions of her body. During the early stages of labour the mother remains in her natural freely hanging head-down posture and hangs with legs hooked wide apart to the wire mesh at the top of the cage. Micturition accompanied by puffing up of the lower part of the abdomen invariably occurs a few minutes before the mother exhibits more pronounced signs of labour. A few drops of clear thick fluid—presumably the amniotic fluid—oozes out of the vaginal opening about 25 minutes before the young one actually begins to emerge from the vaginal orifice. During this interval the mother frequently licks her vaginal orifice, which becomes alternately dilated and contracted several times. The abdominal wall of the mother exhibits a series of contractions, each series lasting about one minute, and consisting of about 75 to 100 violent twitches of the abdominal muscles. During such paroxysms the mother lifts her whole body as if she is applying some pressure on her abdomen and bends the head backwards and forwards, and the foetus appears to be moved inside the uterus. Each series of contractions is punctuated by a gap of 3 to 4 minutes, when the female appears to be at rest, and does not exhibit abdominal contractions. The mother

licks the vaginal opening vigorously as the young starts emerging. Perhaps, the constant licking is intended to lubricate the vaginal orifice to facilitate the emergence of the young. Soon after a part of the head of the young emerges out of the vagina, the mother invariably withdraws her left leg from its attachment to the wire mesh and remains hanging only by the right leg until the young one is completely delivered, except when she is disturbed when she hooks her left leg also to the wire mesh of the cage. This happened whenever the cage was either moved slightly for better observation or whenever some one in the room made a sudden movement or spoke even gently. However, she invariably released her left leg from the roof of the cage within a short time after the disturbance was over. The free left leg of the mother is bent at the knee and does not take any active part in delivery. A period of about 20 minutes elapses between the first appearance of the head in the dilated vaginal opening and the entire emergence of the head. When the head of the young is completely out of the vaginal orifice the mother licks the head of the young one vigorously for a short time and then goes to rest for a period varying from 3 to 4 minutes. The eyes of the young open within 2 to 4 minutes after the entire head is out of the vaginal opening (see plate) and the young is able to move its eyelids. The mother becomes restless after the short period of rest, and experiences quick paroxysms of contractions of the abdominal muscles accompanied by violent contortions of the body as if the mother is trying to forcibly eject the young. The shoulders of the young one emerge out next after about 10 minutes after the emergence of the head. Until this stage the young does not make any apparent movement, but now onwards it frequently shakes its head vigorously and opens